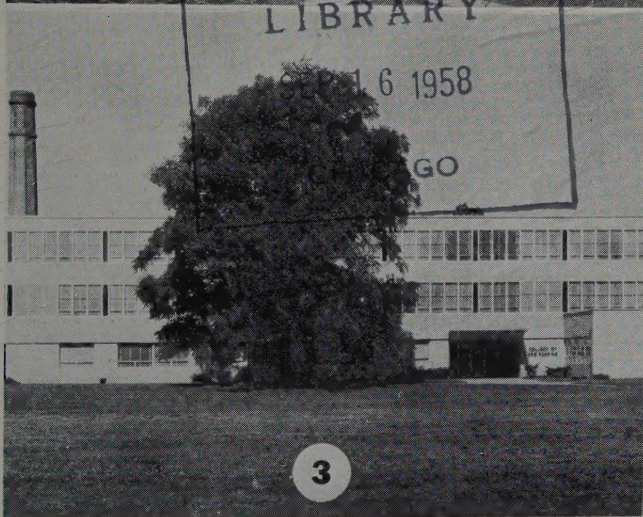
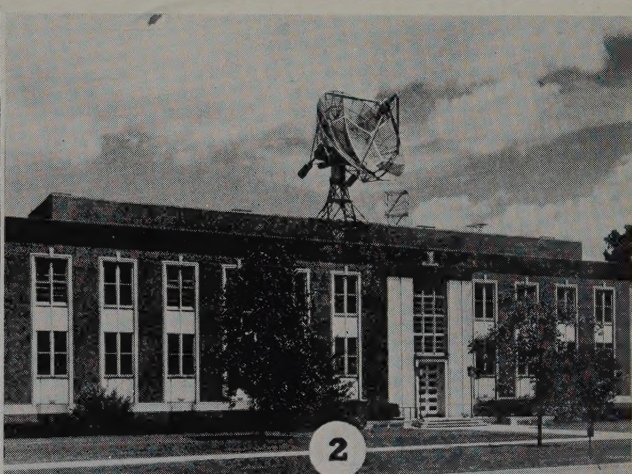




the **ILLINOIS ENGINEER**



BACK TO SCHOOL (See inside cover and page 3)



THE ILLINOIS ENGINEER,
SEPTEMBER 1958,
VOLUME XXXIV, NO. 9

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THE COVER

All over America students and professors alike will join an exodus back to school during the month of September. Among the countless thousands will be the engineering students and faculties of Illinois.

Shown on the cover is a building from each of the State's four major Engineering Schools.

1. The Northwestern University Technological Institute at Evanston. The Dean of the Institute is H. B. Gotaas.

2. The Electrical Engineering Building at the University of Illinois in Urbana-Champaign has on its roof a 28-foot reflective antennae used in research involving radio signals transmitted by an Army Signal Corps laboratory in New Jersey and received here after bouncing off the moon. William L. Everitt is Dean of U-I College of Engineering.

3. Bradley University's Jobst Hall in Peoria houses the departments of mechanical, electrical, industrial and civil engineering. It was erected in 1955 and already the present facilities are taxed to near-capacity. Plans call for additional building on the opposite side of Jobst Hall. Russell E. Gibbs is Dean of the College of Engineering at Bradley.

(Continued on Page 3)

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SUBSCRIPTION RATES

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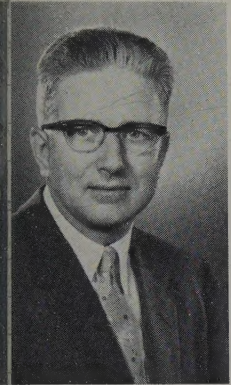
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PRESIDENT'S MESSAGE

By FRANK W. EDWARDS

THE MODERN PROFESSIONAL ENGINEER

The modern professional engineer, in contrast with his counterpart in early history, is an economist. He is a very practical economist because on the basis of his investigations and analyses recommendations are made to proceed, to modify, or to abandon projects and programs which affect the very lives of our industries and our communities. In fact, one short definition of an engineer is, "A person who can do for \$1.00 what any fool can do for \$2.00."



A more complete definition is as follows: "A professional engineer is one who practices the art, based primarily on training in mathematics and the physical sciences, of utilizing economic-

the materials and forces of nature for the benefit of man."

This definition excludes the scientist from the ranks of the engineer. The scientist seeks the basic laws whereas the engineer applies these laws to produce some determined result.

The inventor points the way to the application of a principle but the engineer carries the idea forward to make it economical and useful for the general public.

The technician performs repetitive tasks while the engineer applies basic principles to solve new problems. Modern engineering is an art because the engineer always is expected to reach correct decisions although usually his conclusions must be based on incomplete evidence.

The professional engineer also realizes he has a responsibility to his profession and to his community which is beyond application of his strictly technical service. Normal engineering education recognizes this and engineering college curricula include not only science and technology but a substantial share of liberal arts and economics as well.

The modern professional engineer has a large share of the responsibility for raising our standards of living. In the United States 100 years ago eight-five per cent of our population was required on the farm in order to produce enough food for all the people. Largely as a result of engineering developments such as food handling and processing machinery, refrigeration, all forms of transportation, tractors and numerous other items of

equipment now fifteen per cent can produce enough for our entire population. In other words a large group, actually seventy per cent of our people, has been released to produce luxury items such as bathtubs, automobiles, air planes, radios, television sets, and thousands of other items. This fact is important to everyone.

It is estimated that each of us has the equivalent in mechanical and electrical power of more than 100 silent servants at our disposal. As a result of our tremendous technological development in the last 100 years real wages have increased more than three and a half times while hours of laborers have been reduced from seventy to less than forty per week.

Naturally these accomplishments have not resulted because of the work of the engineer alone but he has been a most important member on a team composed of management, labor and other professional people.

At this point it should be remarked that the figures cited apply to the United States. Although other countries have engineers too, they have not come close to our standards of living. With six per cent of the land area and less than seven per cent of the population of the world we in the United States produce, own and use nearly half of the world's goods. We own more than

90 per cent of all television sets

70 per cent of all automobiles

60 per cent of all telephones

50 per cent of all radios

None of these products existed 100 years ago. Our overwhelming superiority of production and ownership of these items only emphasizes that our American system of competitive enterprise and individual initiative has created something that no other country enjoys. The modern professional engineer has enjoyed a major role in this accomplishment.

I.S.P.E. MEMBERS!

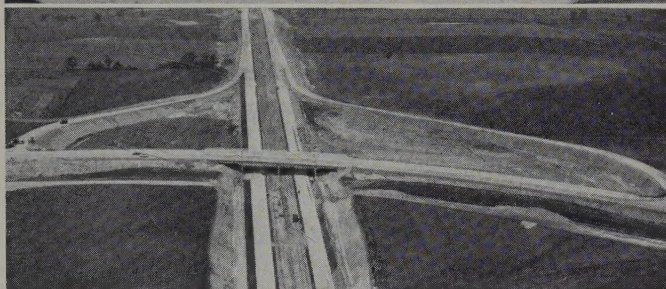
Have You Sent in Comments and
Suggestions About the Draft
of the Proposed

Constitution and By-Laws (July issue)

DEADLINE—SEPTEMBER 30, 1958!

Tollway Monument to Engineering

By LARRY GODDARD



Upper left is a map of the new tollway system which was placed at the eastern tollway entrance and through which Governor William G. Stratton "broke through" as he led a caravan in the opening ceremonies. At lower right Gov. Stratton is seen with Charles L. Dearing, Tollway Commissioner just after they had come through the map.

Lower left is a view of the Sutton Road (Route 59) interchange looking west.

Upper right is an aerial view of Rt. 53 (Rohling Road) interchange south of Rolling Meadows.

Want to participate in a motoring adventure? You can do just that by driving on the new Illinois Tollway, a portion of which was dedicated on August 20.

This writer talked his way onto the new expressway at Rockford on the morning of August 20, hours before it was officially opened to the public, and made a fast enjoyable trip along this new facility without being harrassed by traffic lights, stop signs or cross traffic. The 70-mile trip from Rockford to the O'Hare Airport Tollgate Plaza was made in little more than one hour's driving time.

The dedication ceremony was a very colorful affair which got under way at noon in the area of O'Hare Field and then, led by Governor William G. Stratton, a caravan proceeded along the route westward to Rockford, where it was climaxed by an outdoor dedication dinner at the Forest Hills Country Club.

State and community political figures had a field day of laudatory orations. Governor Stratton stated in his

principal speech that the tollway opened a new era of travel in the northwestern portion of Illinois, and that it was constructed during a period in which it provided much-needed work to temper the recession period. During the peak of the construction more than 20,000 persons were employed and more than 75 million cubic yards of earth were moved in the project.

Ceremonies along the route included performances by local groups at Elgin, Hampshire, and Belvidere. A delegation of Wisconsin officials met the caravan near Rockford and participated in the tollroad official opening.

Months of creative and imaginative effort on the part of 20-some engineering firms resulted in a masterpiece of engineering achievement. The design of the entire tollway kept safety features uppermost, with wide lanes, shoulders, gentle curves and grades, and long sight distances.

The Tollway Commission, headed by Charles L. Dearing,

, set up tollway traffic regulations in conformance with the Illinois Motor Vehicle Law and the Illinois Uniform Acts regulating traffic on highways to contribute to the safety of the tollway. Maximum speeds of 70 mph, with a minimum of 40 mph, have been set for most of the system. Certain areas are reduced to 55 mph. Because of the inherent high-speed characteristics of the tollway, pedestrians, bicycles, motor scooters, mail-drawn vehicles, and farm machinery will not be permitted on the tollroad.

For a real thrill to a new-found freedom of time-saving traveling with safety, we recommend the use of this network which will bring the Midwest and East closer together.

The construction was completed in a record span of 28 months. Originally the Commission had set January 1, 1959, as the time for the opening and the beginning of revenue from the tollway use. The project will now be receiving revenue several months before original expectations. As pointed out by Governor Stratton, this new system was built without placing any additional burden on the taxpayers. It was financed by the public sale of \$11 million of revenue bonds which will be retired by tolls paid by users who choose to travel the tollway. When the bonds have been retired, the tollway will then be free.

Additional sections of the tollway system will be opened to the public in December, at which time it is anticipated the entire system will be completed.

Engineers who designed and supervised the section from O'Hare to Rockford and Beloit included a number of ISPE members: Rochester & Goodell and Harry A. Alke, Salem; Warren & Van Praag, Inc., Decatur; Sleser and Stapleton and Brown & Blauvelt, Jacksonville and Huntley; Crawford, Murphy & Tilly, Springfield; and Hanson, Rice and Collins, Springfield.

Illinois contractors who constructed parts of these sections of the tollway were: Charles Ind Co., Rockford; the Standard Paving Company and Peter J. Crowley Company, Chicago; McCarthy Improvement Co., H. H. Mass Construction Co., and Dillion Stone Company, Alton; Arcole Midwest Corporation, Evanston; Contracting & Materials Company, Louis Garavaglia and Penny Construction Company, Skokie; W. E. O'Neil Construction Co., and D. W. Winkelman Co., Inc., Chicago; and S. J. Groves and Sons Company, Springfield.

Inside Cover (contd. from inside cover)

4. A scene on the campus of Illinois Institute of Technology, Chicago, shows the Metallurgical and Chemical Engineering Building with the Chemistry Building in the background. R. G. Owens is Dean of Engineering at IIT.

The Illinois Society of Professional Engineers dedicates this issue of the **ILLINOIS ENGINEER** to everyone going back to school, particularly those in engineering, and extends best wishes to you for a most successful school year.

ALLISON C. NEFF HAS FATAL ATTACK

Allison C. Neff, president of the National Society of Professional Engineers in 1955-56, died August 11 after a heart attack at his home in Middletown, Ohio. He was vice president and Central Division manager of Armco Drainage and Metal Products, Inc.

Mr. Neff was a frequent visitor in Illinois and appeared on programs of various ISPE activities in recent years. He was the principal speaker at the 1956 Annual Convention in Highland Park and again at the 1958 Annual Convention in Decatur. In April of 1958 Mr. Neff was the speaker at a joint meeting of the Chicago Chapter of ISPE and other engineering societies in the Chicago area. At this meeting he discussed in detail the AIEE proposal. His many friends throughout the State of Illinois will long remember him for his contributions to the engineering profession in this state as well as nationwide.

Mr. Neff served as a member of the Board of Directors of the National Society from 1948 to 1950, and was chairman of several National Society committees. He also served as president of the Ohio Society of Professional Engineers, and of the Cleveland Society of Professional Engineers. He was a member of the Professional Engineers Conference Board for Industry, The Engineering Society of Cincinnati, and an associate member of the American Society of Civil Engineers.

A native of Cleveland, Mr. Neff received a B.S. in mechanical engineering from the Case Institute of Technology in 1925. He began his career as assistant city engineer in East Cleveland. From 1929 to 1944 he was associated with the Ohio Corrugated Culvert Company. He joined Armco Drainage in 1944 as Ohio sales manager.

Mr. Neff was vice president of the Ohio Highway and Turnpike Association from 1948 to 1957. From 1952 to 1957 he was president of the City Planning Commission of Middletown.

Refresher Courses

To those who have received their degrees in engineering and feel the need "to go back to school" for a refresher, we wish to remind you it is not too late to enter a refresher course.

The University of Illinois Division of University Extension in cooperation with the College of Engineering and ISPE is offering courses in various towns and cities. This non-credit course is designed primarily for graduate engineers or the equivalent who wish to take the state examination for registration as licensed professional engineers. Classes are now being formed. If you desire to enter a refresher class you may check with your local Chapter of the Illinois Society of Professional Engineers for time and place it is being given. If a course has not been organized in your area you may get information from the ISPE, 817 Myers Bldg., Springfield.

IS UNIONISM OF THE ENGINEER IN CONFLICT WITH PROFESSIONALISM?

By RAYMOND A. HEIT

This is one of the top three prize-winning papers presented at the February, 1958 Chicago Convention of the American Society of Civil Engineers. The statements contained herein are those of the author and do not necessarily reflect the opinions of the ILLINOIS ENGINEER.

This is the third of three essays on this subject. None of the three authors are from Illinois. All attend engineering colleges in Ohio. Why?

EDITOR

At the present time, anyone associated with engineering knows exactly how delicate a question this really is. Already throughout the country several groups of engineers have unionized and others are thinking of it.

How successful have the unionized engineers been in advancing their cause? Western Electric engineers have had their own union for quite a while. Approximately 7,000 engineers and scientists are numbered in the Western Electric union. This would appear to be a strong enough group. Yet, Western Electric's engineers are still complaining about poor working conditions.

Western Electric Union Benefits?

Benefits have been derived from the Western Electric engineers' union, but only by Western Electric. Western Electric management has used this union to label technicians as engineers and move these men into engineering positions.

As a protest, Western Electric's engineers walked out on strike. The result of this strike was the lowering of the Western Electric engineer to the par of a common laborer. Has the Western Electric engineer benefited from a union? The results speak for themselves.

The origins of the troubles that are being experienced at Western Electric can be blamed on management and the engineers themselves. These same causes can be seen any place where there is a clamoring for a union amongst engineers.

First, management has placed graduate engineers in positions that could be handled by men of lesser training. Second, the engineers should never have accepted these positions. Third, this ban placement has never been rectified, mainly because of poor communication between management and the engineers.

The Engineer in Big Business

Why do engineers get placed in poor positions? This is one of the diseases of big business. Prospects of future big contracts motivate a company's personnel department to go searching high and low for engineers. As a temporary arrangement, these newly-acquired engineers are placed in sub-professional work, the contracts don't

come through and the engineer stays in sub-professional work.

The engineer should definitely balk when placed in position for which his talents are not suited. What would a doctor do if he were asked to change the sheets on a patient's bed?

Poor communication between engineers and management can also be attributed to big business. It is impossible for the president of a corporation to know his engineers, much less understand their problems. On the other hand, management's latest trend is to play blind and turn a deaf ear to the problems of the engineers. Management has even gone so far as to advise engineers who have gone into the management field, to break off all social contacts with their former fellow engineers. This is certainly inexcusable.

Experience at Minneapolis-Honeywell

Another case of unionized engineers was the Federation of Honeywell Engineers at the Minneapolis-Honeywell Co. On the same ballot the Honeywell Engineers decertified from their Federation or plant union, rejected Walter Reuther's AF of L-CIO group and turned down the ESA.

Why this flat refusal of all types of engineering unions? The Honeywell engineers openly admit that they made no gains from unionization. They had gotten their fill of it.

As for the AF of L-CIO, some choice words were reserved for this group. A Honeywell spokesman openly stated that the AF of L-CIO's methods of collective bargaining, strike procedures and general viewpoints are not wanted by engineers and scientists. This was truly a resounding veto of professional unions.

Another interesting group for study is a California engineering union. This organization brings to better light the lack of definition of union members. This group has a membership of 800 which includes 5 graduate civil engineers. The balance of the 800 is made up of such technicians as a rodmen, chainmen and draftsmen. With such a combination, professionals and technicians can be freely interchanged by management with little effort.

Drawings Bear "Union Made" Label

A draftsman from this union was widely publicized recently. It seems that the union was highly indignant over the fact that this draftsman had failed to mark one of his drawings, "Union Made." After designing or doing anything that requires professional skill, there are a few engineers that would want to label their work "Union Made."

Walter Reuther has on many occasions said that some day he will bring the engineers and other white collar workers into his big, happy family. Mr. Reuther isn't concerned with the welfare of the professional. He's interested in the prestige and power that could be gained by the inclusion of the professionals in his union. Not only would the AF of L-CIO's bargaining power increase, but labor could sift into the engineering ranks a little or no formal training. This would put the position of the educated engineer in a very precarious spot.

Some quarters advance the theory: "Let the engineers go to work, join the unions and let them find out for themselves what it is like." This is as bad as telling a child to touch a hot stove so that he might learn by experience to keep his fingers away from the flame. Enough engineers have already had their fingers burnt.

The Alternative to Unions

Unity, rather than unions is the key to professional identification, and the champions of their cause are the Engineers Joint Council and the National Society of Professional Engineers. Only by unity through professional affiliation can any engineer hope to gain the recognition that he wants and deserves.

The engineer has to realize that engineering is a profession, not just a job. Since engineering is a profession, the engineer has certain definite responsibilities to society. The betterment of the world in which we live will be derived from engineering contributions.

If hampered by union membership, engineering contributions can never reach the output that is attained in open competition. What incentive is there for new ideas if there is no reward for them? Only through professional affiliation can new ideas be exchanged and these ideas be built upon.

Management must be made to realize the importance of the engineer's role. It is hard to understand the present attitude of management toward engineers inasmuch as a large percentage of management positions are held by former engineers.

It would be to a company's advantage to have its engineers placed in positions where their abilities are used to the fullest advantage. In many cases though, engineers are found doing daily routine work. Management should take definite steps to eliminate this situation.

Opportunities for further education should be made available to the engineer through his employer, and recognition for further education should also be given. In these fast-moving times, keeping abreast of the times is as important as selling the finished product, for the finished product loses if it is obsolete when it reaches the market.

Professional societies must play an important role in advancing the engineer. This must be done by showing the general public the importance of the engineer. The societies must back professional lobbying for the benefit of engineering.

(Continued on Page 16)

EXECUTIVE SECRETARY'S COMMENTS

It is a pleasure to be on the job as your new Executive Secretary and Editor of the ILLINOIS ENGINEER. You have an old and grand Society for which everyone should be rightfully proud.

As I reflect upon the events which led to my being selected as I.S.P.E. Executive Secretary, I must openly express my appreciation to Paul Doll, Executive Director of the Missouri Society of Professional Engineers, for his guidance in creating a desire to become associated with Professional Engineering and for his kind recommendations. Also thanks must go to Dean N. W. Dougherty for indirectly causing the circumstances which led to my being placed in consideration for the position. I had known Dean Dougherty as Chairman of the Athletic Council at the University of Tennessee, and had he not been given the Engineer Award, it is very likely that I would not have attended the N.S.P.E. National Convention in St. Louis as a representative of the Missouri Associated General Contractors.

Things really moved swiftly and methodically during the July 4th week-end. My minister supervised a series of tests to me on Saturday, July 5. (I'll probably never know or understand the significance of those tests or what they may have revealed. As far as I was concerned, they were a lot of Greek.) I.S.P.E. President Frank Edwards called about 10:45 a.m. Monday, July 7, to inquire if I could come to Springfield on that afternoon to meet with him. I met with Mr. Edwards and Mr. Pat Murphy late in the afternoon, after an encounter with an Illinois State Patrolman and a Jacksonville Justice of the Peace. (Quite a reception on my first trip to Springfield!)

My family and I were highly impressed by the manner in which your committee went about its selection of an Executive Secretary. The atmosphere of real determination to "get things done," the potential for the eventual expansion of I.S.P.E., and, of course, the excellent treatment we received from the officers prompted us to accept the challenging opportunity offered. We accept the challenge in a spirit of humility and in confidence that greater things can be achieved.

As we embark upon this new venture together, I look forward to a long tenure with a high degree of harmony throughout our association.

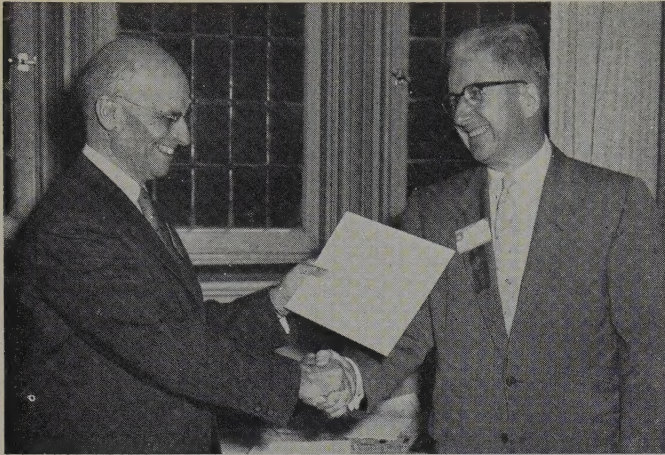
At this point I wish to direct some serious thoughts to each and every Professional Engineer in Illinois.

Your new executive secretary does not possess supernatural capabilities; therefore, he should not be expected to be a magician and "pull rabbits out of a hat." I promise herewith to follow the framework of your policies and to extend myself to the limit of my abilities to do a good job for you. In order to attain higher goals in I.S.P.E., the full cooperation of everyone is necessary. Those who have worked hard in the past must continue to work as hard or harder. Those who have stood on the

(Continued on Page 8)

ISPE MEMBERS HONORED FOR OUTSTANDING CONTRIBUTIONS

Frank W. Edwards, P.E., President of Illinois Society of Professional Engineers and Manager of Chicago Office for Stanley Engineering Company, and Dr. Nathan M. Newmark, P. E., Chairman of the Department of Civil Engineering, University of Illinois, were selected by a panel of eminent judges for citations by the Indiana Technical College.



Frank W. Edwards, ISPE President, receives Citation honoring him for outstanding contributions in science, engineering and industry. At left, Archie T. Keene, President of Indiana Technical College, makes the presentation.

The honors were conferred upon 100 distinguished men and women in the Midwest who have influenced the development of industry through management, science, and engineering. The panel of judges made their selections from a list of some 600 nominees from the five states of Indiana, Illinois, Michigan, Ohio, and Kentucky. The panel was made up of the following prominent business men: Charles F. Kettering, Engineer-Inventor, Kettering Foundation; Wheeler Sammons, Jr., Publisher Who's Who in America; Dr. Robert E. Wilson, Chairman of Board, (retired) Standard Oil Company of Ind.; Philip Sporn, President American Electric Power Company; and Charles H. Buesching, Chairman of Board, Lincoln National Bank and Trust Company.

Archie T. Keene, President of Indiana Technical College, presented the Citations at Fort Wayne, Indiana, June 14 during the dedication of the new Dana Science building on the Indiana Tech campus. A special presentation was made at a luncheon in the University Club, Chicago, on July 16 to those who could not be present at the Fort Wayne ceremonies.

The award presented to President Edwards and Doctor Newmark read as follows: "Citation of honor awarded to . . . as a distinguished member of 100 Midwestern leaders in science, engineering and industry, for his outstanding contributions to mankind."

Dr. Newmark will be the recipient of two additional honors next month. The 1958 Ernest E. Howard award is the latest in a series of honors bestowed on Dr. New-

mark by professional societies and is given in recognition for his contribution to the advancement of structural engineering in the Aseismic design of the Latin Americana tower at Mexico City. Also Dr. Newmark has been named a co-winner of the Norman medal of the American Society of Civil Engineers. He shares the honor with his research assistant, Anestis S. Veletsos who was named as co-winner of the Norman medal. The awards will be presented at the annual convention of the American Society of Civil Engineers at New York City Oct. 15.

SOCIETY NEWS

William L. Everitt, dean of the University of Illinois College of Engineering, will attend the fall meeting of the Engineers' Council for Professional Development October 9 and 10. His attendance at the formal meeting of the Council will be preceded by a two-day meeting of the Committee on Education and Accreditation of which he is Chairman. As a result of his committee deliberations, Dean Everitt will present to ECPD a recommendation on the accreditation of all engineering schools that have been examined during the current year.

The George Sodemann's of Champaign are building a new home out on the north end of Mayfair Subdivision which is west of Champaign-Urbana. George picked up the lot some years ago as part of the fee for consulting services. The new home which will be ready in August is at 1412 Williams Street.

George as you know, is a civil engineer (State U. of Iowa '50) and specializes in water and sewage treatment plants. His firm, Sodemann & Associates of Champaign are doing sewage treatment plants for the towns of Sullivan and Metropolis. George tells how he will take his prospective clients around and show them the plants here or there, especially those plants on which he has been engineer. After the client engages George's firm to do the engineering, he is often surprised to find the design quite different from that shown on the prior inspection trip. George must then point out that the plants which the client saw were five years old and during this interval, designs have changed and progress has been made. That's one of the reasons that consulting engineering on water and sewage treatment plants is so fascinating and so challenging.

With all of this activity, George, Marjorie and their three children are staying close to home and taking no vacation this summer. They had a two week vacation last winter when they went to Florida and they still remember the nice spring vacation they had down on the Gulf the year before. "I'd like to do that again," said George.

Sure, the law gives the pedestrian the right of way. But it doesn't provide for funeral expenses.

Mr. Businessman . . .

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OFFICE MANAGER'S SON FIRST INTRODUCTORY MEMBER

Membership Chairman Harold Sommerschield and his committee, after studying plans for increased membership in our Society, presented a program which was adopted at the Board of Direction meeting June 7. The plan provides an introductory membership for the remainder of the year for Professional Engineers, Structural Engineers, Land Surveyors, and Engineers in Training who have just been registered with the State Department of Registration and Education.

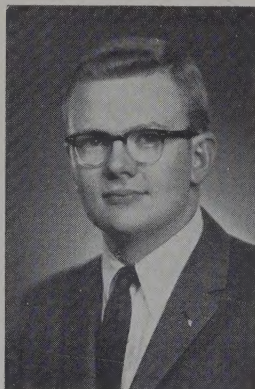
The plan is similar to that initiated last year by the Texas Society, which reported an exceptionally high percentage of membership continuation after the introductory period.

The National Society is cooperating by recognizing such introductory memberships and providing the *American Engineer* and other services to the list furnished by I.S.P.E. Mechanics for inauguration of the introductory membership have been completed and letters have been sent to new registrants welcoming them to the profession and extending membership. Chairman Sommerschield's enthusiasm about the plan has been justified by results to date.

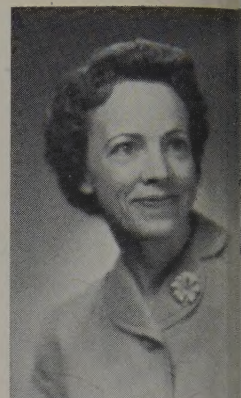
His "every member get a member" campaign is going at a fast pace, too, and his membership teams deserve a big hand.

In a noteworthy, ambitious drive for doubling I.S.P.E.'s membership, Sommerschield's enthusiasm was picked up by the Society's Office Manager, Mary Watt. Her participation in the membership drive has resulted in our welcoming as our first E-I-T Introductory Member her son Ken Paulsell. Ken took the E-I-T examination in May and passed with flying colors. His completed membership application had been on his mother's desk awaiting the glad tidings of his certification by the Registration and Education Board.

Paulsell, a June graduate in mechanical engineering from Illinois Institute of Technology, began college at IIT under a scholarship awarded him as a result of competitive exams taken during his last semester at Springfield High. During his four years at college he served as president of Delta Tau Delta fraternity, scholarship chairman, steward, publicity chairman, pageant chairman and activities chairman; IIT Student Admissions Advisory Board, senior counselor, interfraternity rush chairman, Technorama event chairman '55 and '56, and was elected Beta Omega Nu Honorary. Soon after graduation he was employed by Creole Petroleum Corporation and is now performing his new duties at the Maracaibo, Venezuela, operations of Creole.



Mary Watt, our ISPE Headquarters office manager (see May issue of *ILLINOIS ENGINEER*) has entered into her new job with great enthusiasm. She has spent many extra hours in the office getting things in order, and in addition to recruiting new members she finds time to participate in professional women's activities as well as being a mother and housewife. Being on the job since May, she is, in her words "beginning to get the hang of it."



Petite and attractive, Mary has to look up to all of her three children. Her E-I-T member of the Society now has her paced at double in weight, and half in years. Her other children are a daughter Kay entering her senior year in high school, and a son Don who will be a sophomore.

Chairman Sommerschield's comment on Mrs. Watt's recruit is: "I look forward to meeting him as a new member of I.S.P.E. Please don't stop your efforts with the family."

His word to all of us is: Do you have an application blank in your pocket for a ready reference? If not, get one now. It has worked for me. It will work for you.

Let's put I.S.P.E. over the top in its goal—2,000 new members or bust!

Executive Secretary's . . . (contd. from page 5)

sidelines must pitch in and help if your Society is to move forward and upward.

The extent to which all Professional Engineers pay their dues, the extent to which each one encourages new prospects to join I.S.P.E., the manner in which you serve on committees, and—above all—the standards of conduct which you set for yourselves and demand of others will reflect in the type of organization you want—and in the end will get.

The question resolves itself to a simple proposition: **Do you want the biggest and best Society in the Country, or are you content to drift with the tide and let the Society be a "run of the mill" organization?**

Will you pledge your complete cooperation to assure a greater I.S.P.E.?

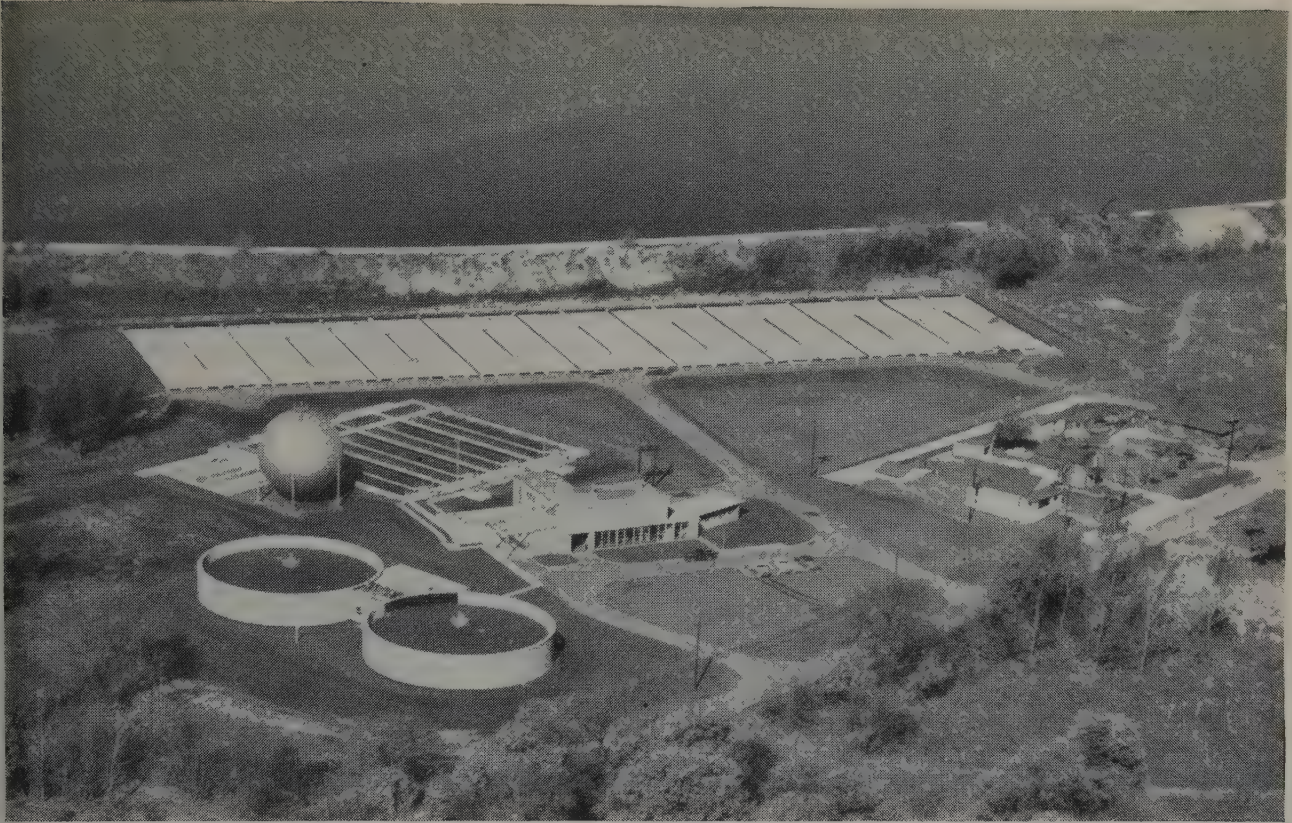
The answer rests completely with **you!**

Let's all join together to meet this great challenge which will benefit all Professional Engineers!

Lou: "This jewelry once belonged to a millionaire."

Sue: "Gosh! What was his name?"

Lou: "Woolworth."



Joliet's new sewage treatment plant will help to restore the cleanliness and utility of the Des Plaines River and to serve as an example to the cities and industries who are still contributing to the river's pollution. Consoer, Townsend and Associates, Consulting Engineers, Chicago.

New plant at Joliet, Illinois employs P.F.T. "Controlled Digestion"

Designed to accommodate a population increase of more than $\frac{1}{3}$, the sewage treatment plant at Joliet will be "new" for years to come. This progressive city is located on the Illinois Deep Waterway and has a present population of some 60,000.

The P.F.T. "Controlled Digestion"

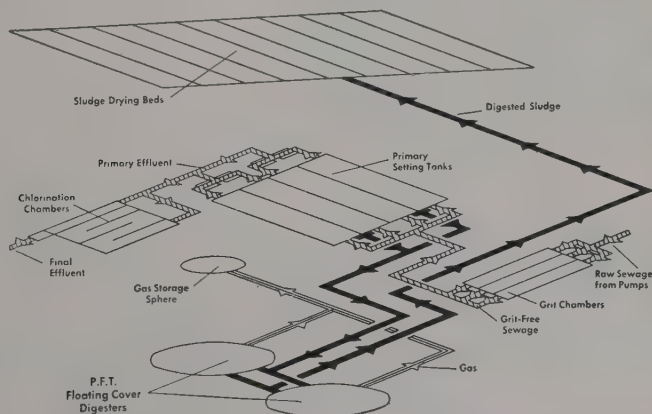
system incorporated into this plant includes: two P.F.T. 85' Floating Covers, two of P.F.T.'s #750 Sludge Gas Fired Heaters, two Floating Cover Position Indicators, Gas Safety Equipment and two P.F.T. #450 Shell and Tube Heat Exchangers.

Here is a flow diagram of this new

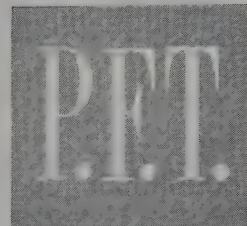
plant. It is designed to effectively treat an average flow of 15 million gallons per day expected from the future population of 82,900.

No wonder Joliet is proud of this modern plant. Information on any of the P.F.T. equipment used in this installation will be sent upon request.

Flow Diagram
of Joliet Plant.



waste treatment equipment
exclusively since 1893



PACIFIC FLUSH TANK CO.

4241 Ravenswood Avenue
Chicago 13, Illinois

COMMITTEES PLAN FOR FUTURE OF ISPE

All the standing and special committees of I.S.P.E. have been doing excellent jobs in laying a sound foundation for the future development and expansion of the Society.

The Publications Committee under the direction of Linas Brown did an outstanding job of editing and publishing the ILLINOIS ENGINEER from April through August. So many individuals cooperated with the committee in helping to meet printing deadlines it is almost impossible to give personal mention to all who participated. The Executive Committee at its meeting August 9, recognized the efforts that had been put forth and voted unanimous thanks to the committee and those who assisted for the fine work they had done.

The committee made an exhaustive study to form the basis of a report they submitted on the alternatives for the future publication of the ILLINOIS ENGINEER. At a meeting in Chicago August 5, it was recommended that the I.S.P.E. office in Springfield assume responsibility for editing the magazine beginning with the September issue. The committee is to continue policy control of the publication and make further studies relative to the magazine's expansion and administration. The committee also approved a recommendation that advertising rates be revised to assure a progressive expansion program. A survey had been made on schedules of rates of comparable publications and it was found that rates

of the ILLINOIS ENGINEER was considerably lower than those of similar magazines. The Executive Committee approved the rate changes to become effective immediately on all new and renewal contracts.

At the Bloomington meeting August 9, the Executive Committee took cognizance of the accomplishments of other committees. Two matters involving ethical conduct had been investigated by the Committee on Ethics and Practice. Recommendations of the ethics group were referred to the Board of Direction meeting at Alton Sept. 6. Other allegations of unethical practice were sent to the Ethics Committee for proper investigation. Len Crawford is chairman.

The Constitution and By-laws Committee under chairmanship of Dean Collins has been working overtime on a redrafting of the By-laws and the Constitution. Comments and suggestions are open to the membership through September 30th. The committee will screen comments and put the draft in final form for consideration by the Board of Direction at its meeting November. The proposed new Constitution and By-laws will then be submitted to the membership for approval by December.

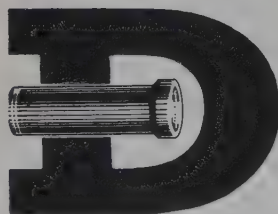
H. F. Sommerschild's Membership Committee has been most active and enthusiastic. The campaign "every member get a new member" is catching throughout the State. The goal of 2,000 new members or bust can be accomplished by next convention time.

In Tampa, Fla., an inverted syphon, made of Dickey Clay Sewer Pipe, is laid with a 20° deflection across a drainage ditch — part of Tampa's 10 million dollar project.



Dickey Pipe selected to carry corrosive wastes in Tampa

Tampa had to find a sewer pipe immune to hydrogen sulphide gas and the corrosive wastes from citrus processing plants, canneries and fertilizer plants. So, they used 785,000 ft. of Dickey Salt-glazed Vitrified Clay Sewer Pipe. Dickey Clay Pipe is chemically inert, immune to acids and is corrosion proof. No matter what acids or alkalis pass through it, Dickey Pipe will not deteriorate — that's why Dickey can offer a 50-year written guarantee. For long life, trouble-free sewers that withstand the attack of acids or alkalis — regardless of the sewage content — always specify Dickey Clay Pipe.



Providing improved sanitation for better living

DICKEY sanitary
salt-glazed
clay pipe

W. S. DICKEY CLAY MFG. CO.

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If it's made of clay it's good... if it's made by Dickey it's better

— 2000 —

Dear Fellow Member:

For a number of years many of us have had an intense desire to develop a strong professional organization among engineers. We have considered the Illinois Society of Professional Engineers and the National Society of Professional Engineers as the media through which this desire could be realized.

Progress made in the past few months attest to the potential of our Society. There is little doubt that effective leadership will build ISPE into a strong force in the development of the professional stature of engineers.

One vital requirement to realize this goal is to increase our membership materially, thereby increasing the sphere of influence of our Society. This, leadership cannot do without help. Every member can play a part in this job. We solicit your help and have provided you each month with an application form for your use. Remove the application form on the next sheet **now** and put it in your pocket for ready reference. Think of an engineer friend of your acquaintance who should be a member of ISPE. Call him on the phone **now** and make an appointment to see him to enlist his help in developing a stronger profession.

We will be grateful if you will help us double our membership this year.

YOUR MEMBERSHIP COMMITTEE

— 2000 —

ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS, Inc.
817 Myers Building, Springfield, Illinois

Date

To the Board of Direction of the
Illinois Society of Professional Engineers:

I hereby apply for admission to the Society as a
National, State, E-I-T, or Student
member. If admitted, I agree to comply with the terms of the Constitution
and the Code of Ethics of the Society, and wish to be enrolled in the
..... Chapter.

FOR OFFICE USE ONLY

Appl'n Recd.

Amount Enc.

Ref. Written.....

Ref. Recd. 1..... 2..... 3.....

Presented to Bd.

Elected.....

Notified.....

I. ALL APPLICANTS complete the following ten spaces:

1. Full Name Name of Spouse
Last First Middle CHECK PREFERRED MAILING ADDRESS

2. Residential Address..... Phone.....
Street City State

3. Business Affiliation..... Position

4. Business Address..... Phone.....
Street City State

5. Registration..... Reg. Number
(Type of Certificate: Prof. Eng., Struct., etc. State Issued)

6. Engineering Field.....
(Civil, Electrical, Mechanical, etc.)

7. Technical Society Affiliations and Grade of Membership.....

8. Birth.....
Date Place Age Sex

9. Education.....
Years School Date of Graduation Degree Obtained

10. Recommended by.....
Signature.....

II. If you are NOT REGISTERED as a professional engineer, structural engineer or an E-I-T, complete the balance of the application form.

Names, addresses, and professional connections of three persons who may be consulted concerning my qualifications (preferably professional engineers who are members of this Society; action will be expedited accompanying this application with the letters of reference).

1.
Name Title Address Member NSPE-ISPE

2.

3.

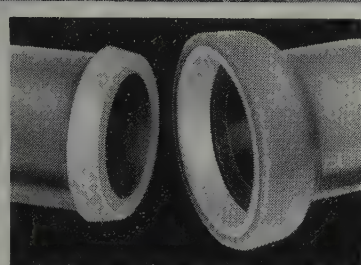
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*Outstanding mechanical joint on longer
Streator Clay Pipe one of city's lifelines*

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STOP root trouble. Insist on Streator Clay Pipe with the new plastic joint. Low cost, trouble free, the joint is on the pipe delivered to the job from Streator's nearby modern plant.

For more information, see your supplier or write or call Streator Drain Tile Company, Streator, Ill.



Amvit is made from a plastic which has many characteristics similar to rubber. It is pliable, permitting deflection without leakage, can absorb shock and vibration.

SPE national member **Dr. James H. Smith** is Associate Superintendent for the Chicago Board of Education. He is responsible for all city schools in the south half of the city. About 225,000 students are enrolled in these institutions which include kindergartens, grammar and junior high schools, high schools, junior colleges at Wilbur, Chicago Vocational and Fenger, and Chicago Teachers College.

Dr. Smith received his Bachelor of Science degree in 1946 and his Doctor of Science degree in 1952. One year later he got a second doctor's degree, this time in Education. In addition to the University of Illinois, University of Chicago and Loyola University, he has studied at his alma mater, Chicago Teachers' College and at Harvard and Columbia Universities.

He is a registered professional engineer in Illinois holding license No. 16109.

Dr. Smith is active in a number of associations and organizations including the American Association for the Advancement of Science, the American Vocational Association, the American Technical Society, the American Educational Research Association, Kiwanis and the City Club of Chicago.

The Chicago Chapter has taken advantage of Dr. Smith's abilities and appointed him to its National Legislative Committee.

Noise Abatement Symposium

How to control noise in jet airliners will be among major problems to be considered at the ninth annual National Noise Abatement Symposium to be held in Chicago on Oct. 9 and 10.

The meeting, to be held at the Hotel Sherman, is sponsored by Armour Research Foundation of Illinois Institute of Technology in conjunction with a number of professional associations.

Other major topics scheduled for discussion include control of industrial noise, and the reduction or elimination of noise in manufactured consumer products and appliances.

Twelve or more papers will be presented by specialists in noise control and reduction during the two day meeting.

Co-sponsors with Armour Research Foundation are the Acoustical Society of America, American Society of Safety Engineers, National Noise Abatement Council, American Society of Planning Officials, American Industrial Hygiene Association, Acoustical Materials Association, and *Noise Control Magazine*.

Inquiries concerning the symposium should be sent to Hale J. Sabine, physics research department, Armour Research Foundation, 10 W. 35th St., Chicago 16, Ill.

CHAPTER CHATTER

An informal dinner meeting was held by several members of the Rockford Chapter on Tuesday evening, August 19. Plans were discussed to kick off a membership drive in the near future. Discussion also centered around a possible Recognition dinner to honor newly registered Professional Engineers in the Rockford area. Those who participated in the informal session with I.S.P.E. Executive Secretary Larry Goddard were: Royce Johnson, Arnold Lundgren, Robert Carlson, Harry Cordes, Lyle Porter, Henry Riedesel, Charles Debes, and C. H. Wilson. The next meeting of the Rockford Chapter is scheduled for September 17.

Warner A. Johnson, Past President of the Rockford Chapter, and Mrs. Johnson participated in an exhibition of square dancing which was a part of the centennial celebration for Freeport. The celebration was held during the week of August 25th. Mr. Johnson is also very active in Boy Scout work and recently took a group of his boys on a voyage down the Mississippi.

The Capital Chapter held its annual Family Picnic at Central Park on Lake Springfield August 26th. Archie Thomas, Executive Secretary of the Illinois Asphalt Contractors Association, headed the committee which did a "bang-up" job making the arrangements which resulted in a "bang-up" good time by all.

The Chicago Chapter is actively promoting a membership drive which includes the possibility of the formation of new chapters in the Chicago area. On September 30th, a meeting will be held in the Chicagoland area of the north part of Cook County. A trip through the Portland Cement Laboratory is planned for 4 P.M. At 6:45 there will be a dinner at the Holloway House on Skokie Boulevard. Cocktails at 6 prior to dinner. The meeting will be for the purpose of organizing chapters in this area. Several leaders of the Society will make brief statements followed by a panel discussion concerning the Society and its program. C. J. McLean, National Director, will M.C. the program. More than one thousand invitations have been sent to engineers in this area.

J. Walter Marquardt, of Springfield, Capital Chapter member who heads the engineering section of Sangamon County's Civil Defense organization, was recognized at a dinner on August 12 in Springfield honoring General Robert Woodward, State Director of Civil Defense.

Editor's Note: We urge anyone to send us items of news that will have a personal interest as well as pictures and of course, anything related to Chapter Activities. Let's hear from the Egyptian and Ambrow areas.



Last month, ISPE vice-president Donald S. Magowan presented a \$4,000 scholarship to George C. Fisher of Dundee. This is the first of two \$4,000 highway engineering scholarships which are now available to young men who are seniors in accredited Illinois high schools and who are qualified to enter the University of Illinois. The scholarship certificate being presented by "Mac" is the one made available by the Associated General Contractors of Illinois. The other scholarship is sponsored jointly by two individual contracting member firms of the Association, S. J. Gray & Sons Company of Springfield, Illinois and Minneapolis, Minnesota and by the McDougal-Hartment Company of Peoria.

Recognition Dinners

A hearty welcome to the ranks of Professional Engineers is extended to all new registrants who were certified by the Registration Board recently. Each new P. E. will have an opportunity to attend an I.S.P.E. Chapter dinner as guest of honor in the near future. The Illinois Engineering Council and the Illinois Society of Professional Engineers are again cooperating in sponsoring dinners throughout the State in which the I.S.P.E. Chapters in conjunction with I.E.C. will honor the new Professional Engineer in a recognition ceremony.

We urge all those who were registered last January or in August to attend one of the dinners in your area. The Chapter will announce the time and place of recognition dinner in a very short time. Chapters which have set dates are: Chicago, October 9; Madison, October 14; DuKane, October 23.

Watch the ILLINOIS ENGINEER for dates of other Chapter Recognition Dinners.

An austere lady at the meat counter asked the butcher to make some suggestions for her dinner menu.

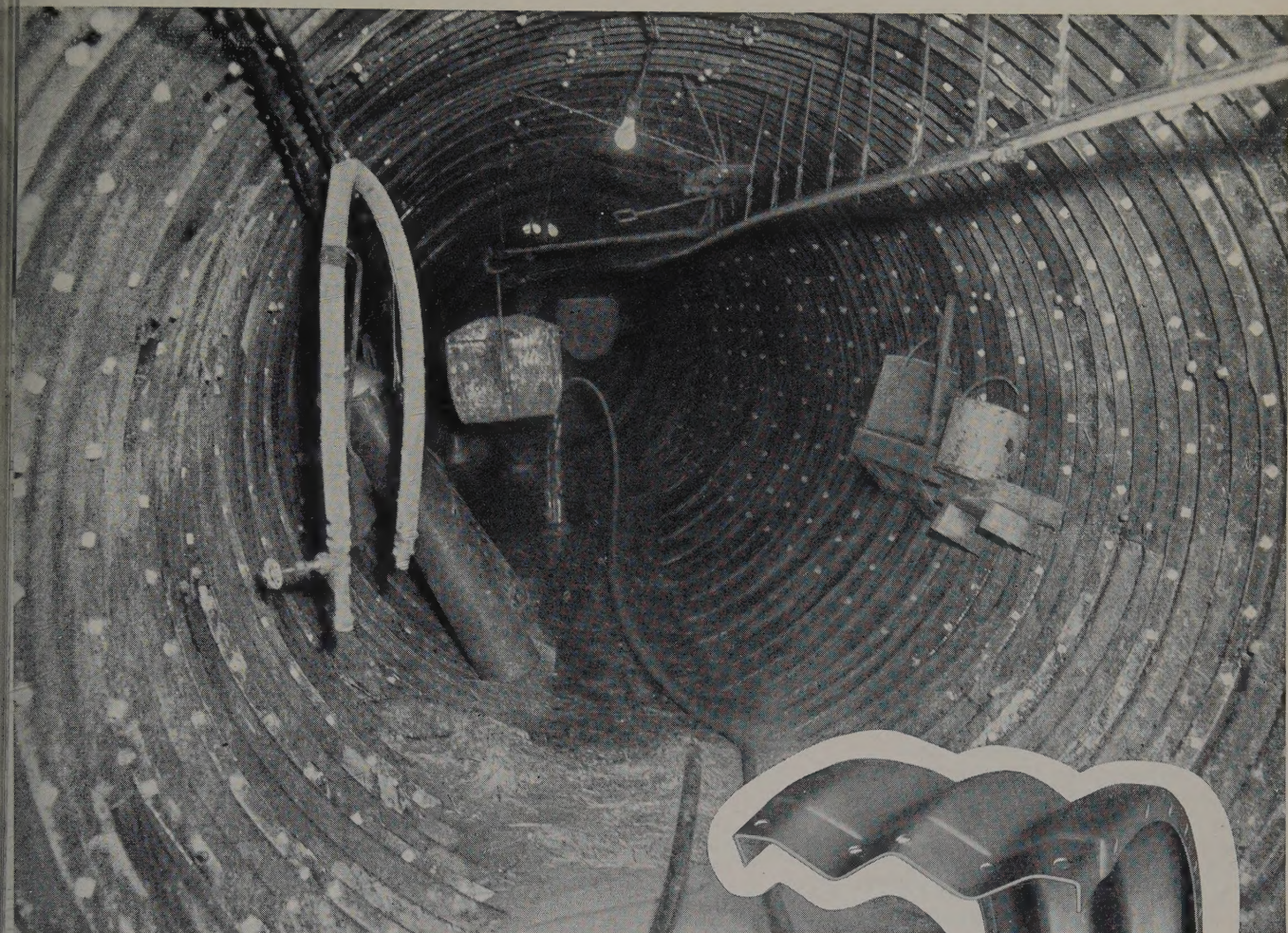
"Of course," said the butcher. "How about this mutton and ox tongue?"

"What?" exclaimed the haughty one. "Do you have the nerve to suggest I eat anything that has been in a cow's mouth? I'll just take a dozen eggs!"

"Mother," the new bride inquired, "what's the best way to protect a wedding ring?"

"Well," replied the mother sagely, "just dip it in dishwater three times a day."

How Would You Put a Large Drainage Line Through Soupy Soil Under a 4-Lane Divided Highway?



Although quicksand surrounds this Armco Liner Plate tunnel under the Queen Elizabeth Way, work progresses safely and efficiently inside. Note litter carrier on monorail used to remove muck.

This is an Armco Liner Plate, used to make tunnel structures.

It couldn't be done with an open trench because traffic had to be maintained. A detour was impractical. So they planned to install the drainage line by tunneling—and Armco Liner Plates got the job.

The project involved a 6-foot-diameter outfall line to be installed under the busy 4-lane Queen Elizabeth Way, an expressway running between Niagara Falls and Toronto, Ontario.

Here's how the job went. First, a shaft was sunk in the center mall of the highway. Then an 8-foot-diameter tunnel was driven in opposite directions under the two lanes. As expected, they ran into pockets of quicksand. In these areas, they used a metal shield operated by hydraulic rams to push forward through the quicksand. A sluice gate near the bottom of the shield permitted removal of the fluid sand.

In solid ground or quicksand, every time the digging advanced 18 inches, an 8-foot-diameter ring of Armco Liner Plates was bolted to the preceding ring. After the structure

was completed, the drainage conduit was installed inside the Liner Plate tunnel.

* * *

Armco Liner Plates have more strength per pound than any other plates commonly used in tunneling jobs. As determined in comparative joint and compression tests, this is due to the deep corrugations and offset-lap joint of Armco Plates. For complete details, write us.

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ARMCO LINER PLATES



Is Unionism . . . (contd. from page 5)

The Role of Engineering Schools

Engineering schools also have a definite role in advancing the engineer. The graduate engineer should have an awareness of his professional status in addition to his technical know-how. The schools should instill professional concepts and their applications to engineering problems. The engineering professor should also be active in professional society activities so that he too can keep up with new ideas.

The engineering school curriculum should also be expanded to include extensive study in public speaking and psychology. An engineer might as well forget an idea if he cannot explain it and show its advantages.

The general public must be kept informed of the work and importance of the engineer. The rank and file must be shown that their prosperity and way of life are all controlled by engineering knowledge and advancements. They must see that their business and livelihood would not be possible without engineers.

Our way of life has certainly benefited from engineering advancements. These advances were made in open competition. These gains, if union controlled, will certainly be curtailed, but the engineer won't be the only one losing ground. Our whole American system stands to lose. Unity, not unionism is the answer.

COMING EVENTS

Board of Direction Meeting, Allerton	Sept. 6
Chicago Chapter, Noon Meeting	Sept. 8
Madison Chapter—Film, "Mining for Nickel"	Sept. 9
Rockford Chapter and Lake County	Sept. 17
Central Illinois Chapter Elks Bldg., Decatur	Sept. 18
DuKane Chapter—Joint Meeting with IAHE	Sept. 18
St. Clair Open House, New Health Bldg., E. St. Louis	Sept. 18
West Central Chapter, Kewanee	Sept. 20
Illinois Valley Chapter	Sept. 23
Peoriarea Chapter (trip to Northmoore Observatory—Ladies invited	Sept. 23
Chicago Chapter—New Northeast Chapter, Organizational Meeting	Sept. 30
4 p.m.—Visit Portland Cement Laboratory;	
6:45 p.m.—Dinner Holloway House on Skokie Boulevard	
ISPE Executive Committee Meeting—Peoria	Oct. 4
Madison Chapter Edwardsville Gun Club—Recognition Dinner for New Engineers, (Edwards, Speaker)	Oct. 14
St. Clair—Developments in the Missile Field in U. S.; Knights of Columbus Club, E. St. Louis	Oct. 15
West Central Chapter, Galesburg	Oct. 15
National Electronics Conference, Chicago	Oct. 13, 14, 15
Convention American Society of Civil Engineers, New York City	Oct. 15
Central Illinois Chapter 3rd Annual Dinner Dance, Hotel Orlando, Decatur Engineers' Wives, Guests	Oct. 18
DuKane Chapter Recognition Dinner for Newly Registered Engineers (Pres. Frank Edwards, Speaker)	Oct. 23
Peoriarea Engineers Recognition Dinner (Judge Evan Yonty, Speaker)	Oct. 23

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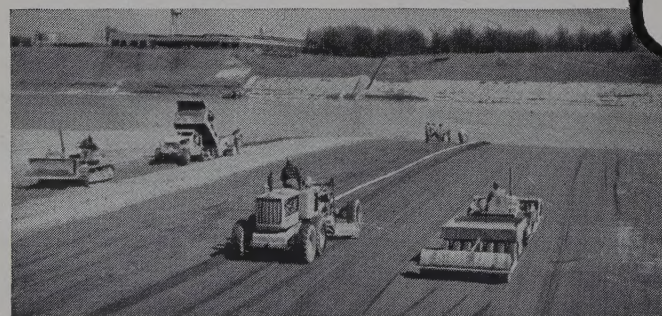
This soil-cement parking lot for the Audubon National Bank Building in Audubon, N. J., provides ample space for autos at low cost.



Attractive soil-cement municipal parking lots like this in Winnetka, Ill., invite suburban shoppers and help build business for stores.



Durable, mud-free soil-cement parking area for new autos awaiting transshipment from a river barge terminal in Memphis, Tenn.



Construction view of Memphis lot shown completed in photo above.

Pave Parking Lots Quickly and at Low Cost with **SOIL-CEMENT**

Soil-cement is an ideal pavement for all types of parking lots. Although low in first cost it puts an end to dust, mud, ruts, soft spots and chuckholes.

Paving with soil-cement is economical because about 85% of the material needed is the soil or old granular material already on the site. Mixed with portland cement and water, this material provides a sturdy base for any parking lot. A light bituminous surface completes the pavement.

Construction crews quickly learn the simple and easy methods of building soil-cement pavement. The process is fast. An experienced crew can build a good-sized parking lot in a day.

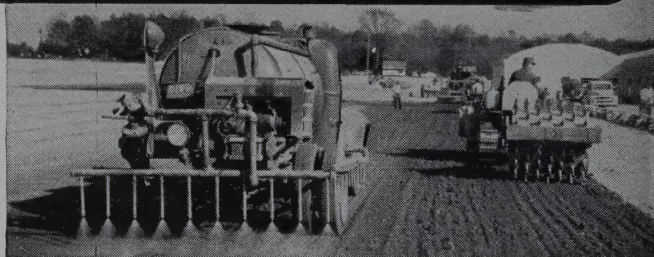
Soil-cement pavements for parking lots, streets, country roads or airports are long-lived. That's because soil-cement is durable—so durable that practically all of the soil-cement pavements built since 1935, when scientific controls were established, are still giving dependable all-weather service with only routine surface maintenance.

Why not use durable, economical soil-cement on your next parking lot paving project? For more information about soil-cement paving for any purpose, write for free illustrated literature. It is distributed only in United States and Canada.

PORTLAND CEMENT ASSOCIATION

111 West Washington Street, Chicago 2, Illinois

A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work



Building soil-cement parking lot for Cleveland shopping center.